

## CLAIMS

1. A brake system comprising:
    - a rotatable drum;
    - a band brake surrounding a portion of said drum including an anchor end and an apply end;
  - 5                   an anchor member engaging said anchor end including sensor means to provide a reaction signal proportional to the force generated at said anchor end;
  - an apply means for generating an apply force at said apply end to enforce engagement of said brake band and said drum; and
  - 10                  control means responsive to said reaction signal to adjust said apply force to a desired apply force.
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2. The brake system defined in Claim 1 further comprising:
    - speed sensing means for generating a speed signal proportional to a speed of said drum; and
    - said control means responsive to both said reaction signal and said speed signal to adjust said apply force to a desired apply force.
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3. The brake system defined in Claim 1 further comprising:
    - a force sensing means responsive to said apply force for generating an apply signal proportional to said apply force; and
    - said control means responsive to all of said reaction signal and said speed signal and said apply signal to adjust said apply force to a desired apply force.
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4. The brake system defined in Claim 1 further wherein:
    - said apply means is a member of a group consisting of a linear actuator means and a torque to thrust means.

5. A method of establishing an actuator force in a brake system having a rotating drum and a brake band, said method comprising the steps of:
  - establishing a desired brake torque;
  - determining a speed of said drum;
  - 5 determining a desired anchor force;
  - measuring an actual anchor force at said brake band;
  - comparing said desired anchor force and said actual anchor force;

and

  - issuing an actuator control signal to a brake actuator signal to an 10 actuator at said brake band to apply an actuator braking force thereto proportional to said brake actuator signal.
6. The method of establishing an actuator force in a brake system defined in Claim 5 further comprising the steps of:
  - determining an actual actuator force at said actuator; and
  - comparing said actual actuator force with said proportional brake 5 actuator force.